WHAT IS CLAIMED IS:

1. An apparatus for converting sulfur compounds in a hydrocarbon stream, said apparatus comprising:

a prewash section for converting hydrogen sulfide to sodium sulfide;

a hydrocarbon feed conduit with an inlet in communication with said prewash section;

an extractor section for converting mercaptans to mercaptides, said extractor section being disposed directly above said prewash section;

a hydrocarbon product conduit with an outlet in communication with said extractor section; and

a conduit having an outlet in communication with the prewash section and an inlet in communication with the extractor section.

2. The apparatus of claim 1 wherein said extractor section includes a coalescer at a top thereof.

3. The apparatus of claim 1 wherein one vessel includes said extractor section and said prewash section.

4. The apparatus of claim 3 wherein said extractor section and said prewash section are separated by an imperforate baffle.

5. The apparatus of claim 1 wherein the inlet to the feed conduit to said prewash section is disposed proximate to a bottom of said prewash section.

6. The apparatus of claim 5 wherein said feed conduit includes an inlet for water upstream of said inlet to said prewash section and an inlet for caustic upstream of said inlet for water.

7. The apparatus of claim 2 wherein the inlet to said product conduit is above said coalescer.

8. The apparatus of claim 2 wherein said apparatus includes a regenerated alkaline conduit with an outlet in communication with said extractor section below said coalescer.

9. The apparatus of claim 1 wherein one vessel includes said extractor section and said prewash section and said extractor section includes a coalescer at top thereof.

10. The apparatus of claim 9 wherein a spent alkaline conduit has an inlet in communication with a bottom of said extractor section.

11. A process for converting sulfur compounds in a hydrocarbon stream comprising:

feeding a hydrocarbon stream containing sulfur compounds to a prewash section containing alkali to convert hydrogen sulfide to sodium sulfide;

withdrawing a prewashed hydrocarbon stream from said prewash section;

feeding said prewashed hydrocarbon stream to an extractor section to convert mercaptans to mercaptides, said extractor section being directly above said prewash section; and

withdrawing an extracted hydrocarbon stream containing mercaptides from said extractor section.

12. The process of claim 11 wherein said hydrocarbon stream is fed at proximate a bottom of said prewash section and said prewashed hydrocarbon stream is withdrawn from proximate a top of said prewash section.

13. The process of claim 11 wherein alkali containing mercaptides is withdrawn from said extractor section.

14. The process of claim 11 wherein said hydrocarbon stream must travel through a coalescer before being withdrawn from said extractor section.

15. The process of claim 11 wherein regenerated alkali is fed to said extractor section below said coalescer.

16. The process of claim 11 wherein the alkali in said extractor section has a greater concentration than the alkali in said prewash section.

17. The process of claim 11 wherein an alkaline stream containing mercaptides is withdrawn from said prewash section.

18. An apparatus for converting sulfur compounds in a hydrocarbon stream, said apparatus comprising:

an extractor section for converting mercaptans to mercaptides;

a hydrocarbon feed conduit with an outlet in communication with said extractor section proximate a bottom of said extractor section;

a hydrocarbon product conduit with an inlet in communication with said extractor section proximate a top of said extractor section;

a structure for facilitating contact between alkali and hydrocarbon disposed between the outlet of said hydrocarbon feed conduit and the inlet of said hydrocarbon product inlet;

an alkaline conduit with an inlet disposed below the outlet to said hydrocarbon feed conduit; and

a coalescer in said extractor section disposed between the inlet to said hydrocarbon product conduit and a top of said structure for facilitating contact between alkali and hydrocarbon, said coalescer permitting no more than 1 ppm of alkali from passing therethrough.

19. The apparatus of claim 18 wherein an open settling volume is disposed between a top of said structure for facilitating contact between alkali and hydrocarbon and said coalescer.

20. The apparatus of claim 19 wherein said structure for facilitating contact between alkali and hydrocarbon comprises a plurality of decks and said open settling volume could accommodate one of said decks.